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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,604	08/30/2001	Herlin Chang	CHAN3110/EM/7186	6770
7590 10/30/2003			EXAMINER	
RIDER BENNETT, LL., 333 SOUTH SEVENTH STREET SUITE 2000 MINNEAPOLIS, MN 55402			DEBERADINIS, ROBERT L	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,604

Applicant(s)

CHANG ET AL.

Examiner

Robert DeBeradinis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-7 and 13-18 is/are allowed.
- 6) ☐ Claim(s) 8-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The reply filed 7/23/03 consists of amendments to the specification and the claims and remarks related to rejection of claims. The amendment has been entered. Claims 1-7 allowable, Claims 8-18 are not allowable as explained below.

Response to Arguments

Applicant's arguments with respect to claims 8-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by
BALAKRISHNAN 6,212,079.

Regarding claim 8.

BALAKRISHNAN discloses a power source control module, comprising:

A MOSFET transistor (figure 1, 147) to control whether power is
transmitted to a load (130);

A bridge rectifier (105) to rectify power to provide said MOSFET
transistor with an electric current;

A bias circuit to provide said MOSFET transistor a fixed bias
(inherent in the control circuit to control the MOSFET to respond to a control signal);

A coupler (133) to control a state of said MOSFET transistor by an
external control signal passing through said coupler.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over
BALAKRISHNAN 6,212,079.

Regarding claim 9.

The Examiner takes official notice. It is well known in the art that other
transistor components may be used to replace said MOSFET transistor, for example a
triac may be used to control power to a load instead of the MOSFET transistor, the triac
and the MOSFET both have a conduction state and a non-conduction state which
provides a switching function. The motivation to use a triac over the MOSFET would be
the ability to switch higher load currents.

Regarding claim 10.

The Examiner takes official notice, other coupling devices other than optical coupling devices are well known in the art, for example a transistor may be used as a coupling device wherein the base is driven with a control signal instead of being optically coupled. The motivation to drive the transistor base directly would be to reduce the number of components if the requirement of isolation was reduced.

Claims 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over BALAKRISHNAN 6,212,079 in view of ANDERSON 4,961,059.

Regarding claim 11.

BALAKRISHNAN discloses bias circuit comprising diode 125 and capacitor 127 (column 3, lines 34, 35).

BALAKRISHNAN does not disclose the bias circuit having R1, C1, R2, C2, R3 and D2.

ANDERSON discloses the bias circuit having R1, C1, R2, C2 arrangement of parts but does not teach the R3, D2 arrangement.

The Examiner takes official notice. The use of a zener diode to limit a voltage is well known in the art as well as the use of a limiting resistor to limit the current through the zener diode.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the bias circuit disclose by BALAKRISHNAN to include the

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R1, C1, R2, C2 as disclosed by ANDERSON and to include an R3, D2 arrangement.

The motivation to modify the bias circuit would be to shape the control signal and to limit its voltage.

Regarding claim 12.

BALAKRISHNAN discloses the diode (125) used to provide a half wave rectified signal to the bias circuit.

BALAKRISHNAN does not disclose D3.

The Examiner takes official notice that full wave rectifiers are well known in the art and that full wave rectification has less ripple than half wave rectification.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the bias circuit disclosed by BALAKRISHNAN in view of ANDERSON to include diode D3. The motivation to include D3 would be to provide full wave rectification to the bias circuit to reduce voltage ripple.

Allowable Subject Matter

Claims 1-7, 13-18 allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose the circuit arrangement as claimed in claim 1 nor does the prior art teach controlling the states of said first diode and said second diode by an external control signal passing through said coupler.

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Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (703) 306- 5857. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Sircus, can be reached on (703) 308-31190. The Fax phone number for this Group is (703) 308-7722.

RLD

OCTOBER 20, 2003

A handwritten signature in cursive script, appearing to read "Robert L. DeBeradinis".